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Effect of grazing previously abandoned grassland on performance in sheep

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Background

- ✓ Large areas of cultivated grasslands are abandoned
- ✓ Access to grassland is limited in sheep production in Norway
- ✓ Is abandoned grassland a potential pasture resource?

Maintenance of local grazing resources:
Grazing management, meat production and animal welfare (2013-2016)

1. Lamb performance
2. Behavior
3. Pasture yield, herbage consumption and botanical composition
4. Economy
5. Social aspects

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Background: Sheep farming in Norway

- ✓ Winter: Indoor housing + lambing
- ✓ Spring: Pasture close to farm
- ✓ Summer: Range mountain and forest pasture
- ✓ Autumn: Pasture close to farm, until slaughter or indoor housing

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- ✓ **Is abandoned grassland a potential pasture resource?**

Method

- ✓ One sheep flock of Norwegian white spæl
- ✓ 83(88) ewes(lambs) in 2014
- ✓ 77(106) ewes(lambs) in 2015
- ✓ Tingvoll municipality in Møre and Romsdal County (63º 1', 8º 8')

Method: Abandoned cultivated grassland:

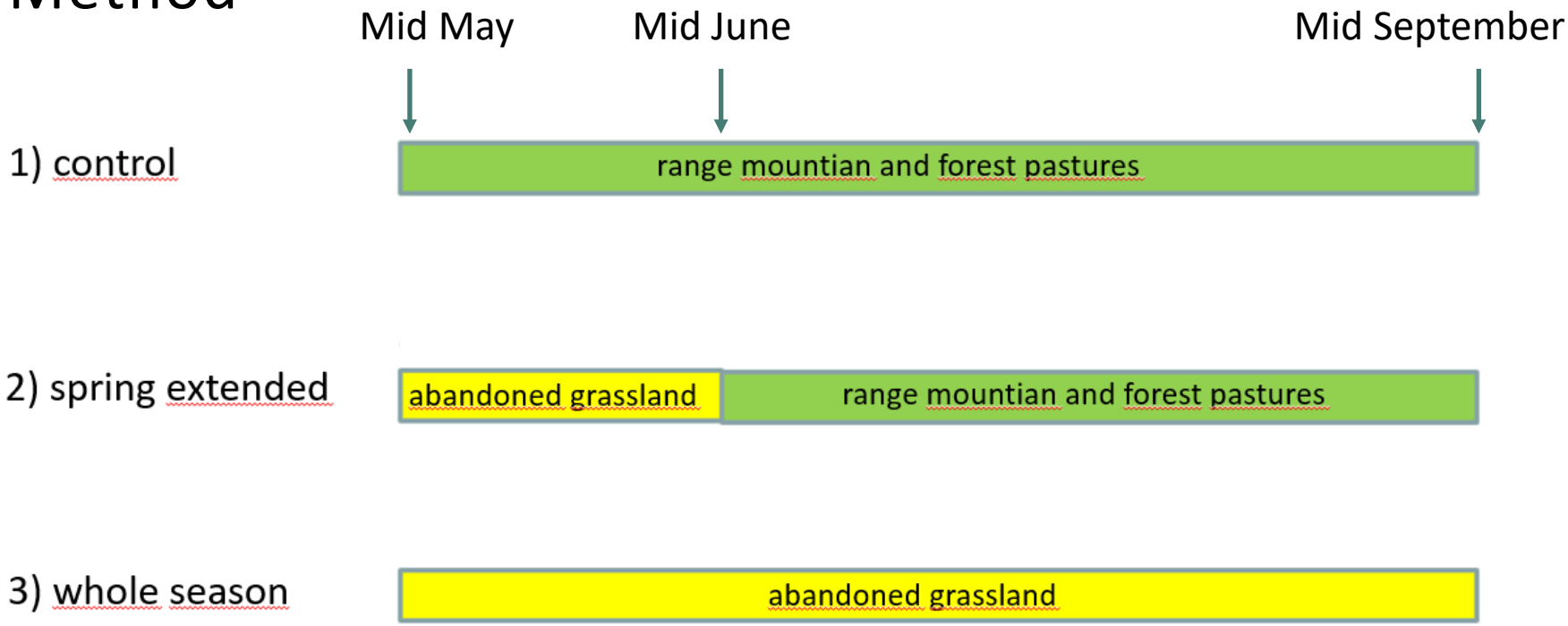
- ✓ a 15.3 ha grassland that has been unmanaged for 12 years situated in Sunndal municipality (62º 51', 8º 26')
- ✓ before abandonment, the area was used as pasture for dairy cows

Method

The sheep flock was each year assigned into three treatments:

1) Control
    - common farm procedure with short spring grazing period close to the farm before summer grazing on range mountain and forest pasture
2) Spring extended
    - 4 weeks extended spring grazing period on abandoned cultivated grassland before summer grazing on range pasture
3) Whole season grazing on abandoned cultivated grassland

Method

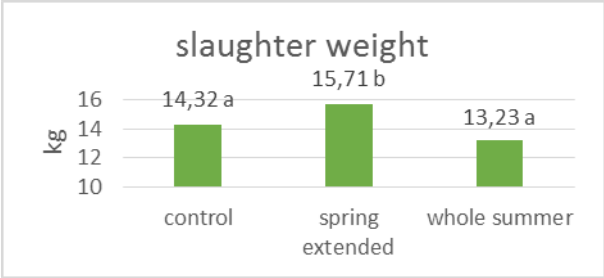

Mid May
Mid June
Mid September
1) control
range mountian and forest pastures
2) spring extended
abandoned grassland
range mountian and forest pastures
3) whole season
abandoned grassland

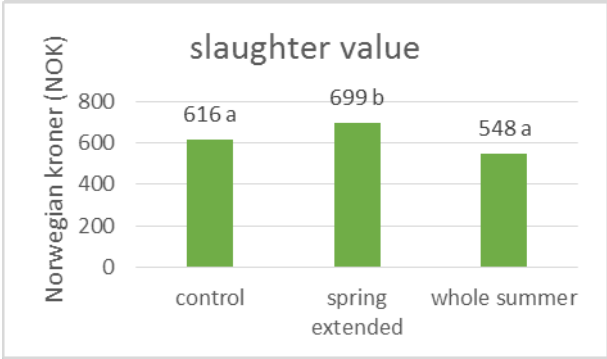
Method: Recordings

- ✓ Weight: birth, spring, spring-extended and autumn
- ✓ Slaughter info: weight, carcass-characteristics and carcass value
- ✓ All lambs were treated with tick repellent at the beginning of the spring-extended grazing period.
- ✓ Ewes and lambs were monitored regularly for internal parasites.

Results


weight gain
g/day
0,3
0,2
0,1
0
0,229 a
0,255 b
0,206 c
control
spring extended
whole summer


slaughter weight
kg
16
14
12
10
14,32 a
15,71 b
13,23 a
control
spring extended
whole summer


slaughter value
Norwegian kroner (NOK)
800
600
400
200
0
616 a
699 b
548 a
control
spring extended
whole summer

Conclusion

The use of abandoned cultivated grassland for an extended spring grazing period improved weight gain, slaughter weight and carcass value of lambs.

Including such grassland in existing sheep farming has potential to improved performance and economy.

Additional info:

Grazing during summertime stimulated the **grassland productivity up to 1.7 times** the ungrazed control plots on the abandoned cultivated grassland

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FYLKESMANNEN I MØRE OG ROMSDAL